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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,028	08/15/2001	Markku Verkama	083531-0279295	9392
909 7590 05/29/2008 PILLSBURY WINTHROP SHAW PITTMAN, LLP P.O. BOX 10500 MCLEAN, VA 22102				
EXAMINER				
IQBAL, KHAWAR				
ART UNIT		PAPER NUMBER		
2617				
MAIL DATE		DELIVERY MODE		
05/29/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

09/830,028

**Applicant(s)**

VERKAMA, MARKKU

**Examiner**

KHAWAR IQBAL

**Art Unit**

2617

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 2-21-08.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date: \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-12, 14-17 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Tseng et al (6172974) in views of Navaro et al (6108560).

Regarding claims 1-3 Tseng et al teaches a digital telecommunication system comprising (fig. 2,4):

a first center (MSC 12 A) configured to enable speech communication between a plurality of terminals (MS A, MS B, mobile stations 20), the first center being associated with a calling terminal (MS A) and including a first transcoder unit (col. 4, 35-56);

a second center (12 B) configured to enable speech communication between a plurality of terminals (MS A, MS B), the second centre being associated with a called terminal (MS B) and including a second transcoder unit (col. 4, 35-56),

wherein at least one of the first (MSC 12 A) and second centres (12 B) comprises a mobile switching centre (fig. 2),

wherein the first and second transcoder units (originating MSC and terminating MSC) and each of the terminals (MS A, MS B) include speech codecs (MS A include speech codec 24, MS B include speech codec 24), in which each of the speech codecs comprises an encoder unit and decoder unit (col. 4, 35-56, col. 7, lines 1-40),

wherein the terminals are arranged to provide information regarding the supported speech codecs to their associated switching centers (each mobile station 20, the codes 24 is provided in MSCs/BSCs, col. 4, lines 33-37, base on terminating MSC/BSC generates tones that indicates the type of transcoding and cross transcoding are predefined during the network setup) (col. 5, 33-65, col. 9, lines 40-65);

the first centre is configured to perform handshaking (bypass) with the second center, the handshaking including indication of the speech codecs supported by the calling terminal (col. 9, lines 40-65);

wherein at least one of the first and second centres is configured to establish call connections that bypass one or more of the transcoder units or to control the transcoder units to transmit encoded speech between the called and calling terminals without performing speech encoding operations so that speech is encoded and decoded only in the terminals (col. 7, lines 1-40, col. 9, lines 40-65). Tseng et al further teaches the originating and terminating units of voice communication system contains a vocoder, base station for wireless communication and a BSC/MSC having a vocoder. The base stations are interconnected through voice channels. The originating and terminating units contain A/D-D/A converters and apparatus for achieving tandem free operation (TFO) in which the vocoders in MSC/BSC are bypassed. Signaling device of terminating unit responds to call initiation signal of originating unit through BSC/MSC and sends a low frequency signal through channel to the base station of originating unit. The frequency of signal indicates the type and capabilities of terminating unit vocoder which is less than the roll-off frequency of A/D-D/A converters. An analyzer of

originating unit base station analyses the received low frequency signal and determines the compatible condition of digital signals between vocoders. The control units provided in base stations directs voice signals between units and bypasses both BSC/MSB vocoders, when the digital signals of terminating unit vocoder is compatible with originating unit vocoder and directs digital voice signal in tandem mode when the digital signal of terminating unit vocoder is not compatible with originating unit. The compatible condition of digital signals of terminating unit vocoder with originating unit vocoder is determined, by analysis of low frequency signal. Tseng et al does not specifically state in detail wherein at least one of the first and second centres is configured to choose the speech codec used commonly by the calling and called terminals.

In an analogous art, Navarro et al teaches more detail wherein at least one of the first and second centres is configured to choose the speech codec used commonly by the calling and called terminals (As appropriate codec is selected, based on signaling information with reference to data provided in the form of look-up table) (col. 2, line 56-col. 3, line 10, col. 3, line 62-col. 4, line 6, col. 5, lines 53-60, col. 8, line 5-col. 9, line 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Tseng et al by specifically adding features centre is configured to choose the speech codec used commonly by the calling and called terminals in order to enhance system performance improves voice quality, when the codecs supported are of common type, tandem free operation is established and hence quality of GSM link is maximized. As appropriate codec is selected, based on signaling information with reference to data provided in the form of look-up table, the

quality of the link is maximized. Provides communication link wherein the signal quality is maintained at or around the best signal quality for the given codecs available as taught by Navaro et al.

Regarding claim 14 Tseng et al teaches a mobile switching centre in a digital telecommunication network configured to receive information regarding supported speech codecs of a calling terminal and each of the terminals (MS A, MS B) include speech codecs, in which each of the speech codecs comprises an encoder unit and decoder unit, and connect a transcoder located in a transcoder unit to a call connection when required, wherein (col. 4, 35-56, col. 7, lines 1-40, see claim 1):

the mobile switching centre is configured to perform handshaking with another centre associated with a called terminal (col. 5, 33-65,col. 9, lines 40-65), the handshaking including indication of speech codecs supported by the calling terminal associated with the centre (col. 5, 33-65,col. 9, lines 40-65, see claim 1), and

the mobile switching centre is configured to connect a call connection that bypasses the transcoder unit or to control the transcoder unit to transmit the encoded speech without performing speech encoding operations in such a way that speech encoding and decoding are only performed in the calling or called terminal (col. 7, lines 1-40, col. 9, lines 40-65). Tseng et al does not specifically state in detail wherein at least one of the first and second centres is configured to choose the speech codec used commonly by the calling and called terminals.

In an analogous art, Navaro et al teaches more detail wherein at least one of the first and second centres is configured to choose the speech codec used commonly by

the calling and called terminals (col. 2, line 56-col. 3, line 10, col. 3, line 62-col. 4, line 6, col. 8, line 5-col. 9, line 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Tseng et al by specifically adding features centre is configured to choose the speech codec used commonly by the calling and called terminals in order to enhance system performance improves voice quality, when the codecs supported are of common type, tandem free operation is established and hence quality of GSM link is maximized. As appropriate codec is selected, based on signaling information with reference to data provided in the form of look-up table, the quality of the link is maximized. Provides communication link wherein the signal quality is maintained at or around the best signal quality for the given codecs available as taught by Navaro et al.

Regarding claim 4 Tseng et al teaches wherein the handshaking is performed as outband signaling (col. 9, lines 40-65).

Regarding claim 5 Tseng et al teaches wherein the first and second centres are configured to perform the handshaking in association with a routing information inquiry issued in response to a determination that the called terminal is a mobile subscriber (col. 9, lines 40-65, see claim 1).

Regarding claims 6,7 Tseng et al teaches the first center is configured to send the routing information inquiry including information associated with the speed coded sported by the calling terminal (col. 7, lines 1-40,. 9, lines 40-65, see claim 1).

Regarding claims 8,9 Tseng et al teaches wherein the first and second centres are configured to perform the handshaking in association with inter-MSC signaling (col. 6, lines 30-63, col. 7, lines 1-40,. 9, lines 30-65, figs. 2 and 4).

Regarding claims 10,11 Tseng et al teaches wherein, when required, at least one of the first and second centre is configured to notify the associated of the speech codec it has to use as the result of the handshaking (col. 7, lines 1-40,. 9, lines 40-65, see claim 1).

Regarding claim 12 Tseng et al teaches wherein a pulse code modulated digital link exists between the first and second centres, and the first and second centres are configured to control their respective transcoder units to adapt an encoded speech signal to one or more least significant bits of PCM samples without transcoding (col. 4, 35-56).

Tseng et al teach regarding claims 15-17 signaling is ISUP setup is an IAM and ANM message (see fig. 2).

3. Claims 13 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Tseng et al (6172974) in views of Navaro et al (6108560) and Hellwig et al (6295302).

Tseng et al and Navaro et al do not specifically state the system configured to support packet link.

In an analogous art, Hellwig et al teaches the system configured to support packet link (col. 8, lines 16-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Tseng et al and Navaro et al by specifically adding features packet link in order to enhance



system performance improves voice quality, when the codecs supported are of common type, tandem free operation is established and hence quality of internet link is maximized as taught by Hellwig et al.

***Response to Arguments***

Applicant's arguments filed in the 02-21-08 Remarks have been fully considered but they are not persuasive. Examiner has thoroughly reviewed applicant's arguments but firmly believes the cited reference to reasonably and properly meets the claimed limitations. Applicant's argument was that "Applicant submits that Tseng is completely silent with respect to providing any reference to any activity in which a terminal would indicate its speech codecs to a switching center, or in which a terminal would even have occasion to indicate its speech codecs to a switching center". Examiner respectfully disagrees with this argument. Tseng teaches each mobile station 20, the codes 24 is provided in MSCs/BSCs, col. 4, lines 33-37, base on indicated codec information, terminating MSC/BSC generates tones that indicates the type of transcoding and cross transcoding are predefined during the network setup) (col. 5, 33-65, col. 9, lines 40-65).

Also Navarro et al teaches a look-up table determines the codecs that are to be used between each subscriber radio station and base station, based on the signaling information. Then, the codec presently used by either one or both of the subscriber radio station is changed based on the determination result. When codecs supported between the two subscriber radio stations are common, tandem free operation is established (col. 2, line 56-col. 3, line 10, col. 3, line 62-col. 4, line 6, col. 8, line 5-col. 9, line 5).

Applicant's argument was that "Thus, Navarro does not teach or suggest any centers which would choose the speech codec used commonly by the calling and called terminals". Examiner respectfully disagrees with this argument. Navarro et al teaches a

look-up table determines the codecs that are to be used between each subscriber radio station and base station, based on the signaling information. Then, the codec presently used by either one or both of the subscriber radio station is changed based on the determination result. When codecs supported between the two subscriber radio stations are common, tandem free operation is established. Based on the signaling information, appropriate codec for each pair of subscriber radio station and base station is determined with reference to the data provided in the form of look-up table which considers the codecs presently employed by the subscriber radio station in establishing call, and codecs supported by each subscriber radio station to base station link (col. 2, line 56-col. 3, line 10, col. 3, line 62-col. 4, line 6, col. 8, line 5-col. 9, line 5). In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. For example Navarro et al states each radio station operable to communicate with a base station, the two radio stations each being operable to communicate with a respective base station by the use of a selected one of several codecs, wherein, in use, each radio station signals to the other the codecs supported between itself and its respective base station and an appropriate codec is selected based upon the signaling information (col. 3, line 62-col. 4, line 6). After a common codec has been chosen, the BSS attempts to change codec. The result of the codec modification attempt is reported to the peer transcoder. If both transcoders have the same codec then TFO mode can start. Otherwise TFO establishment is not undertaken (col. 8, line 65-col. 9, line 5).The compatibility search starts by comparison

of the codecs presently in use by both mobiles. If they are different then reference data (or look-up table) on a common codec to be used is employed. When such a codec is found, each BSC requires the mobile to hand over to a new codec if the one currently in use must be changed to satisfy the codec compatibility required by TFO. Transcoders must then exchange information regarding the success of implementing the common codec (col. 5, lines 53-60).

Therefore, the rejections of the claims will remain.

#### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAWAR IQBAL whose telephone number is (571)272-7909. The examiner can normally be reached on 9 am to 6.30 pm Monday to Thur.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, GEORGE ENG can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Eng/  
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/K. I./  
Examiner, Art Unit 2617